

II. Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-25. (Canceled)

26. (Previously Presented) A subcutaneously assembled in place orthopedic construct, comprising:

- a first bone anchor comprising a distal end and a proximal end, the proximal end including a head with a portal extending therethrough;

- a second bone anchor comprising a distal end and a proximal end, the proximal end including a head with a portal extending therethrough;

- a first support structure, configured to extend through the portals in the first and second bone anchors;

- a second support structure, configured to be attached to the spine; and

- a cross bar, which connects the first support structure to the second support structure to form an orthopedic construct;

- wherein the cross bar is attached to the first and second support structures subcutaneously; and

- wherein at least the cross bar comprises a media that is hardenable while the support structure is positioned within the body of a patient.

27. (Previously Presented) A subcutaneously assembled in place orthopedic construct as in claim 26, wherein the first support structure comprises a hardenable media.

28. (Previously Presented) A subcutaneously assembled in place orthopedic construct as in claim 27, further comprising a first cross tie connecting the cross bar to the first support, and a second cross tie connecting the cross bar the second support.

29. (Previously Presented) A subcutaneously assembled in place orthopedic construct as in claim 26, further comprising a first cross tie connecting the cross bar to the first support, and a second cross tie connecting the cross bar the second support.

30. (Previously Presented) A subcutaneously assembled in place orthopedic construct as in claim 26, wherein the cross bar includes a first aperture for receiving the first support, and a second aperture for receiving the second support.

31-32. (Canceled)

33. (Previously Presented) A subcutaneously assembled in place orthopedic construct as in claim 26, wherein the hardenable material comprises an epoxy.

34. (Previously Presented) A subcutaneously assembled in place orthopedic construct as in claim 26, wherein the hardenable material comprises a polyurethane.

35. (Previously Presented) A subcutaneously assembled in place orthopedic construct as in claim 26, wherein at least the cross bar comprises an outer wall, defining a cavity therein; and a plurality of reinforcing fibers in the cavity.

36-52. (Canceled)

53. (New) A prosthetic stabilization system for subcutaneous assembly within a patient's body, the system comprising:

- a first pair of bone anchors, each comprising a distal end and a proximal end, the proximal end including a head with a portal extending therethrough;

- a second pair of bone anchors, each comprising a distal end and a proximal end, the proximal end including a head with a portal extending therethrough;

- a first elongated support structure, sized to extend between a first vertebrae and a second vertebrae and through the portals in the first pair of bone anchors;

- a second elongated support structure, sized to extend between the first vertebrae and the second vertebrae and extend through the portals in the second pair of bone anchors; and

- a crossbar attachable to the first and second support structures;

wherein at least the crossbar comprises a media that is hardenable while the crossbar is positioned within the patient's body.

54. (New) The system of claim 53, wherein at least the first support structure comprises the media that is hardenable while the support structure is positioned within the patient's body.

55. (New) The system of claim 53, further comprising:

a first connector attaching the crossbar to the first support structure, the connector comprising a first aperture for receiving the crossbar and a second aperture for receiving the first support structure.

56. (New) The system of claim 55, wherein a first axis extends through and is substantially aligned with the first aperture of the first connector; and

wherein a second axis extends through and is substantially aligned with the second aperture of the first connector, the second axis being generally perpendicular to the first axis.

57. (New) The system of claim 55, further comprising:

a second connector attaching the crossbar to the second support structure, the connector comprising a third aperture for receiving the crossbar and a fourth aperture for receiving the second support structure;

wherein a third axis extends through and is substantially aligned with the third aperture of the second connector; and

wherein a fourth axis extends through and is substantially aligned with the fourth aperture of the second connector, the fourth axis being generally perpendicular to the third axis.

58. (New) The system of claim 53, wherein the crossbar includes a first aperture for receiving the first support structure, and a second aperture for receiving the second support structure.

59. (New) The system of claim 58, wherein the first aperture is disposed adjacent a first end of the crossbar and the second aperture is disposed adjacent a second end of the crossbar.

60. (New) The system of claim 53, wherein the crossbar comprises a tubular sleeve and an inflatable member disposed within the tubular sleeve; and
wherein the hardenable media is disposed within the inflatable member.

61. (New) The system of claim 53, wherein the crossbar includes plurality of circumferentially extending slots such that the crossbar is flexible.

62. (New) The system of claim 53, wherein at least the crossbar comprises an outer wall, defining a cavity therein, and a plurality of reinforcing fibers in the cavity.

63. (New) A prosthetic stabilization system for subcutaneous assembly within a patient's body, the system comprising:

a first spinal stabilization member comprising an inflatable balloon with a proximal end, a distal end, and a flexible wall defining an interior cavity extending between the proximal and distal ends, wherein the first stabilization member is sized to extend between a first and second vertebrae;

a second spinal stabilization member comprising an inflatable balloon with a proximal end, a distal end, and a flexible wall defining an interior cavity extending between the proximal and distal ends, wherein the second stabilization member is sized to extend between the first and second vertebrae;

a crossbar attachable to the first and second spinal stabilization members, the crossbar comprising an inflatable balloon with a proximal end, a distal end, a flexible wall defining an interior cavity extending between the proximal and distal ends, wherein the crossbar has a first deflated state with a first maximum diameter and a second inflated state with a second maximum diameter, the second maximum diameter being greater than the first maximum diameter;

a first connector for attaching the crossbar to the first stabilization member, the first connector comprising a first aperture having a first diameter for receiving the crossbar and a second aperture having a second diameter for receiving the first stabilization member, the second aperture being generally perpendicular to the first aperture, wherein the first diameter of the first aperture is less than the second maximum diameter of the crossbar; and

a second connector for attaching the crossbar to the second stabilization member, the second connector comprising a third aperture having a third diameter for receiving the crossbar and a fourth aperture having a fourth diameter for receiving the second stabilization member; the third aperture being generally perpendicular to the fourth aperture; wherein the third diameter of the third aperture is less than the second maximum diameter of the crossbar;

wherein the inflatable crossbar is elongated to extend through the first aperture of the first connector and the third aperture of the third connector in its first deflated state such that inflation of the crossbar to its inflated state while extending through the first and third apertures secures the crossbar to the first and second connectors.

64. (New) The system of claim 63, wherein the balloons of first and second spinal stabilization members have a deflated state with a maximum deflated diameter and a inflated state with a maximum inflated diameter, the deflated diameter being less than the second and fourth diameters of the first and second connectors, and the inflated diameter being greater than the second and fourth diameters of the first and second connectors.